

### REMARKS

Claims 1, 13-16, 18, 19, 25-39, 41-58, and 60-64 are currently pending. Claims 40 and 59 have been canceled without prejudice. Claim 1 has been amended to incorporate subject matter from indicated-as-allowable claim 41 and intervening claim 40 and paragraph 0081 from the application as filed. Claim 42 has been amended to incorporate subject matter from indicated-as-allowable claim 60 and intervening claim 59 and paragraph 0081 from the application as filed. Claims 19, 41, 46, and 60 have been amended for clarification. Claims 62-64 have been added to enhance the scope of Applicant's patent coverage and are supported by claims 1, 36, and 37, or 42, 55, and 56, respectively. It is respectfully submitted that no new matter has been added.

The Patent Office rejected claims 19 and 45 under 35 U.S.C. 112, second paragraph, as being indefinite.

Claim 19 has been amended to recite the "detected transmission mode" since the means for detecting will detect either the first transmission mode or the second transmission mode and processing of the second signal will be in accordance with the detected transmission mode.

Claim 46 has been amended to change its dependency from claim 25 to claim 45 (it is claim 46 that is believed to be the claim in question, not claim 45).

It is respectfully submitted that no new matter has been added and it is respectfully requested that the Patent Office withdraw its rejection of claims 19 and 46 (not 45) under 35 U.S.C. 112, second paragraph.

Applicant thanks the Patent Office for its indication that claims 13-16, 18, 19, and 61 are allowed and its indication that claims 37, 41, 56, and 60 recite patentable subject matter. However, Applicant believes that all pending claims are in condition for allowance.

The Patent Office rejected claims 1, 29-31, 40, 42, 43, 48-50, and 59 under 35 U.S.C. 102(b) as being anticipated by Zhang, "Reduced-State MIMO sequence estimation for EDGE systems," Signals, Systems and Computers, 2002, Conference Record of the Thirty-Sixth Asilomar Conference, 3-6 Nov. 2002, volume 1, pages 541-545.

For a claim to be anticipated, each and every non-inherent claim limitation must be taught in a single reference (from MPEP 2131).

Claim 1 recites as follows:

A method, comprising: receiving a wireless communication signal by a receiver from each of at least two spatially separated transmit antennas associated with at least one transmitter or from at least two transmitters; performing on a corresponding complex composite base band received signal, comprised of real modulation signals, complex modulation signals or a combination of real and complex modulation signals, joint pre-filtering and reduced state sequence detection of real and imaginary parts of signals, from a single receive antenna branch or from a plurality of receive antenna branches, separately to filter out noise plus residual interference across inphase (I) and quadrature (Q) branches; and determining whether operation of the receiver is in a first mode in which an interfering signal is determined to be directed to a different receiver or in a second mode in which the signals received from each of the at least two transmit antennas are to be processed as data.

Another rejected independent claim, claim 42, recites subject matter similar to that of claim 1.

New independent claim 62 recites as follows:

A method, comprising: receiving a wireless communication signal by a receiver from each of at least two spatially separated transmit antennas associated with at least one transmitter or from at least two transmitters; performing on a corresponding complex composite base band received signal, comprised of real modulation signals, complex modulation signals or a combination of real and complex modulation signals, joint pre-filtering and reduced state sequence detection of real and imaginary parts of signals, from a single receive antenna branch or from a plurality of receive antenna branches, separately to filter out noise plus residual interference across inphase (I) and quadrature (Q) branches; and sequentially estimating desired and dominant interfering signal channel impulse responses, where channel estimation blindly identifies a dominant interferer modulation type and its training sequence, where modulation identification comprises use of  $e^{j\pi k/2}$ ,  $e^{j3\pi k/8}$  constellation rotations associated with GMSK and 8PSK modulations, respectively, and where training sequence identification comprises use of an estimation metric over a plurality of possible interference training sequence pairs.

New independent claim 63 recites subject matter similar to that of claim 62.

Without explicitly or impliedly admitting any need for amendment of the claims, to advance prosecution, Applicant has amended claims 1 and 42, the two rejected independent claims, with subject matter from claims indicated-as-allowable.

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Thus, it is respectfully submitted that all of claims 1, 13-16, 18, 19, 25-39, 41-58, and 60-63 are allowable over Zhang, whether or not in combination with any of Onggosanusi, Olsson, and/or Hafeez.

The Patent Office is respectfully requested to reconsider and remove the rejections of the claims 1, 25-36, 38-40, 42-55, and 57-59 under 35 U.S.C. 102(b) based on Zhang or under 35 U.S.C. 103(a) based on Zhang in view of Onggosanusi, Olsson, and/or Hafeez, and to allow all of the pending claims 1, 13-16, 18, 19, 25-39, 41-58, and 60-63 as now presented for examination. An early notification of the allowability of claims 1, 13-16, 18, 19, 25-39, 41-58, and 60-63 is earnestly solicited.

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Respectfully submitted:

Walter J. Malinowski April 28, 2008  
Walter J. Malinowski Date

Reg. No.: 43,423  
Customer No.: 29683

HARRINGTON & SMITH, PC  
4 Research Drive  
Shelton, CT 06484-6212  
Telephone: (203) 925-9400, extension 19  
Facsimile: (203) 944-0245

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4/28/2008 Cherif Y. Mounir  
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